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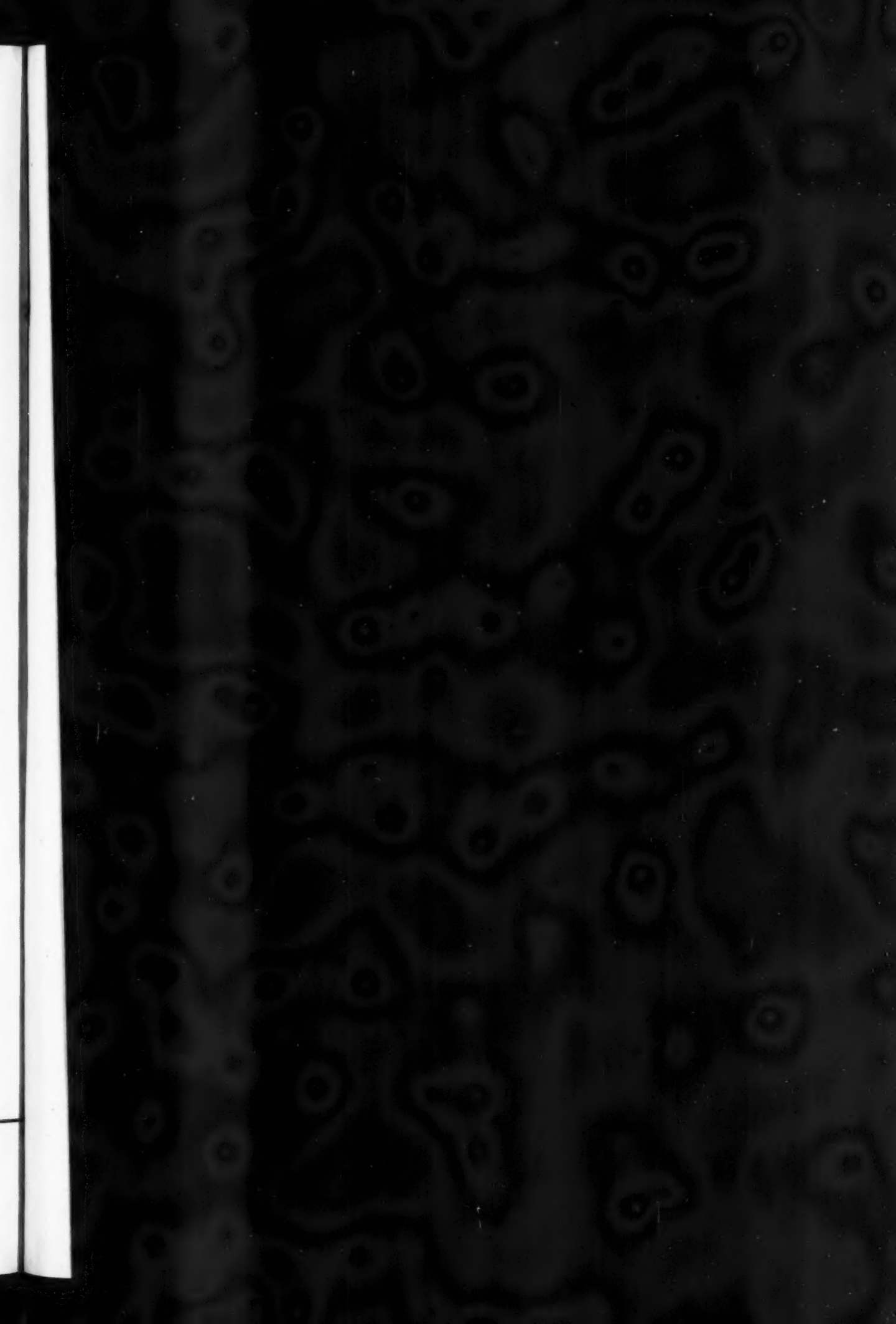

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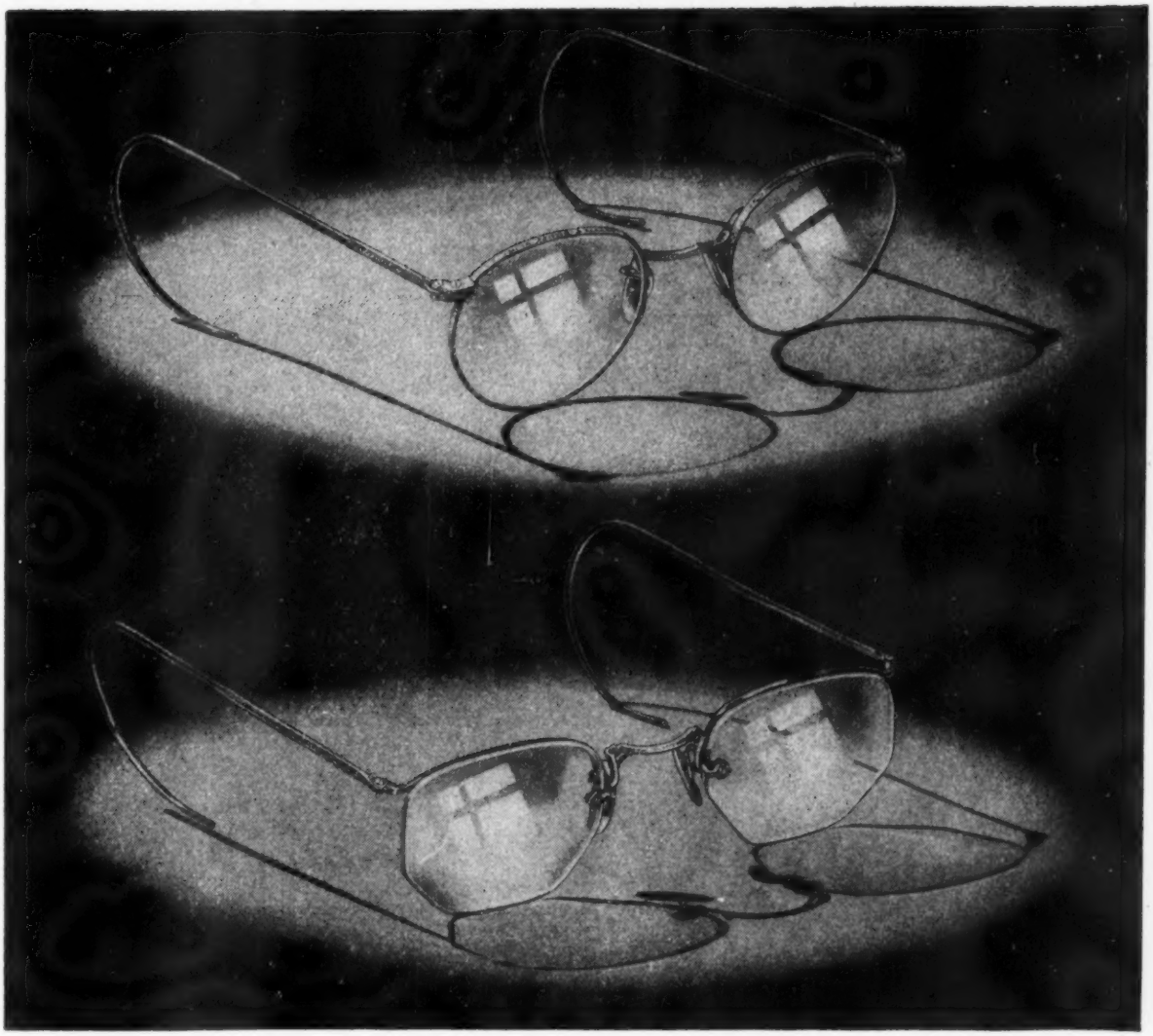

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*These professional services are worth infinitely more than the cost of the material in the glasses themselves.

EXAMINATION: Professional examination for possible pathological eye conditions.

REFRACTION: Scientific measure of your ability to see.

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Scheduled for publication in Good Housekeeping for August; in Look, August 22, and in the August 26 issue of The Saturday Evening Post.

The Cost Of Eye Care Is Not "The Price Of Glasses"

Since June of 1942, this thought has dominated more than 130 million copies of AO educational messages circulated throughout the nation.

This AMERICAN Plan educational campaign is written and published to help correct the public misconception of the relation of glasses to eye care and visual efficiency. It is based on the need for public recognition of professional eye care.

It does not advertise glasses, but rather, is designed to impress upon millions of readers that professional services—(not "the price of glasses")—are the all-important factors in eye care.

Appearing in The Saturday Evening Post, Life, Look and Good Housekeeping, this AO educational campaign is, in the true sense of the word—"Dedicated to the Advancement of Professional Eye Care."

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YOU know that helpless, exasperated feeling. You jab and miss, jab and miss . . . but a miss never counts. Not even a near-miss! You've got to hit that tiny target right in the "eye"—or no success. You hope for a lucky jab. But the target seems to move, no matter how firmly you hold it. One moment it's in focus. Then it blurs. You look again. Two needles, instead of one! Then none at all. The strain to see makes your eyes water and sting, your head ache, your nerves jump, your back pound.
Know what's the matter? Of course you do. You know your eyes are "playing tricks" again. The same tricks that make telephone numbers blur, that make newspaper type "tremble" and fade; that make any critical near-point sewing task a real hardship. But don't reproach your eyes. Help them. Naturally, they have become weaker with age . . . wearied from long hours of use and abuse . . . wrinkled with telltale "crow's-feet" due to neglect and long-unrecognized defects.
Yet you wouldn't take a million dollars for these precious, irreplaceable eyes! Then why continue to deny them the rest, relaxation and professional care they need?
Maybe you didn't know. Or was it your vanity? Or just carelessness?
Whatever the reason, do the sensible thing now. Place the care of your eyes in the hands of a competent, professional man. Profit by the scientific services and skills of the Ophthalmologist, the Optometrist, the Optician. These experts can help you. Charlatans and faddists cannot. Don't gamble with the only pair of eyes you will ever have. The odds are too great against you.
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COMMISSIONED OPTOMETRISTS H-V (S) U.S.N.R. ON ACTIVE DUTY IN THE U. S. NAVY*

Ralph F. Coöps, Lieutenant Commander, H-V (S) U.S.N.R.
U. S. Naval Air Station,
San Diego, California

To the Fellows of The American Academy of Optometry, Southern California Chapter. You have asked for a comprehensive picture of the activities of your colleagues now serving as Commissioned Officers, Class H-V (S) United States Naval Reserve. To do this, it will be necessary to briefly outline some of the early history.

The American Academy of Optometry has, since its inception, led the way to the ultimate goal of optometry—optometry as a profession. To this end, definite advances have been made in education and ethical and professional standards. Let us look to the purposes for which the Academy was founded.

First: To afford an opportunity for the presentation and discussion of the results of clinical and experimental research in visual problems.

Second: To encourage the scientific observation and reporting of exceptional and instructive conditions encountered in the practice of the individual.

These principles and ideals adopted by the Academy, together with the ethical and professional standards necessary for fellowship, have placed a mark of distinction upon the Academy. Fellowship in the Academy is, indeed, a mark of distinction, and places the optometrist in a position of confidence, trust and recognition by other professions. These

*The opinions or assertions contained herein are the private ones of the writer and are not to be construed as official or reflecting the views of the Navy Department or the Naval Service at large. Submitted on April 18, 1944, for publication in the July, 1944, issue of the AMERICAN JOURNAL OF OPTOMETRY AND ARCHIVES OF AMERICAN ACADEMY OF OPTOMETRY. Presented before the Southern California Chapter, American Academy of Optometry.

ideals and principles, as practiced by the Fellows of the American Academy of Optometry, are largely responsible for the position which optometry occupies today.

Doctor Leslie Burdette, a Fellow of the American Academy of Optometry and Past President of The American Optometric Association, with keen understanding for optometry's welfare, and a desire to be of real service to his profession, set the course for us to follow to the ultimate end—commissions for optometrists as optometrists in the United States Navy. For several years prior to the acceptance of optometry, Doctor Burdette worked hard and unceasingly until he had at last accomplished his goal. Optometry will ever be grateful to this man of vision who sacrificed personal gain for the welfare and future of his profession.

Optometrists were at last commissioned in the United States Naval Reserve, class H-V(S)—Hospital Volunteer Specialists. This class includes several non-medical specialists who are attached to the Medical Department to perform their special duties. The first group was commissioned in April and May of 1941 and ordered to active duty in July and August, 1941. In the San Diego area there were three optometrists —one at the Training Station, one at the Marine Base and one at the Naval Air Station. At one time the Training Station had a complement of four optometrists. Three were ordered to duty elsewhere and one was replaced by another newly commissioned optometrist. The Repair Base secured the services of a commissioned optometrist about a year ago.

The uniform is the distinctive naval uniform, with the caduceus emblem. This emblem is normally the emblem of the Hospital Corps, and it differentiates us from the medical officers, who wear the oak leaf. Dental officers wear the oak leaf with two small acorns, one on each side of the stem. Line and staff officers, except the medical officers, are addressed as "Mister" up to the rank of full Commander. Then they are addressed by their rank. Optometrists wearing the caduceus emblem are very readily addressed by medical officers as "Mister." Often, after the professional barrier is forgotten with close association, the "Mister" is dispensed with and we are addressed by our title of "Doctor." The caduceus emblem on the sleeve of optometrists caused no little comment until the officers came to know that we were not members of the Hospital Corps. Members of the Hospital Corps are officers who have come up through the ranks as Pharmacist's Mates and their duties are almost entirely administrative.

The original ranks given to optometrists were Ensign, Lieutenant (jg) and Lieutenant. These ranks correspond to Second Lieutenant, First Lieutenant and Captain in other armed forces. All of the original optometrists, the first to report for active duty, have been advanced to Lieutenant. The Lieutenants on active duty for the same period have been advanced to Lieutenant Commander. Further advancement beyond Lieutenant Commander is by selection. Optometrists have not been on active duty long enough at the present time to be eligible for advancement to the rank of Commander.

I quote a letter from the office of the Surgeon General, U. S. Navy:

"The procurement quota for optometrists in Class H-V(S), USNR, was originally established at thirty (30). Additional appointments have been accomplished and at the present time there are sixty-three (63) optometrists appointed in Class H-V(S), U. S. Naval Reserve.

"With reference to the request for the names, first rank, present rank and station of duty of optometrists, you are informed it is the policy of the Bureau of Medicine and Surgery not to divulge this information. The optometrists originally appointed in the rank of Lieut., H-V(S), USNR, have subsequently been promoted to the rank of Lieut. Comdr.; however, the majority of appointments in Class H-V(S), USNR, have been accomplished in the rank of Ensign.

"Of the sixty-three (63) optometrists appointed in Class H-V(S), USNR, approximately twenty-five (25) have been assigned duties with base and mobile optical repair units. Reports from Senior Medical Officers in foreign activities indicate the optical repair units have done excellent work, and are a splendid addition to the Medical Department of the Navy. Reports from Medical Department activities in the continental limits of the United States where officers, Class H-V(S), USNR, (specialty, optometry), are serving, have been credible and indicate their services are being utilized in their special field, and to the best interests of the Medical Department of the Navy."

The chief duty for optometrists is that for which they are specifically trained—the refraction or examination of the human eye, to determine its refractive error and the prescribing of visual prosthetic devices thereof. Extra curricular duties involve being placed as a member of courts martial boards, boards of investigation, etc.

Preventative optometry is an unexplored field, and one in which much could be accomplished for the welfare of humanity. This field might be termed "Visual Education." Young eyes at visual tasks in school and in industry need guidance in correct ocular postural habits, proper lighting, and need corrective lenses especially adapted to their particular visual task.

Heretofore optometry has limited itself to the measuring of errors of refraction and to the adaptation of corrective visual prosthetic devices. This new field opens a new horizon for optometry and offers relief to eyes that otherwise would be subject to increasing errors of refraction and muscular anomalies.

TYPES OF OCULAR EXAMINATIONS

Form "Y." This is the regular physical examination for entrance into the naval service. The eye examination is naked vision R and L and binocular. Vision is recorded by the fraction method, the numerator being the distance from the twenty foot letter that the patient can read the standard twenty-twenty letter. If glasses are needed to bring the correction to twenty-twenty, that correction is recorded for both R and L eye. An enlisted man is acceptable now provided he has six-twentieths in one eye and a binocular vision of fifteen-twentieths uncorrected. *Color Vision.* He must pass the pseudo isochromatic color plates.

Form "1." This is the standard examination for aviators. The visual part consists of a comprehensive visual screening examination. Every optometrist should be familiar with this examination, especially those who undertake to do any type of corrective procedure for those in civil life who expect to apply for aviation training. The eye examination Form No. 1—how it is conducted and the disqualifying factors—is as follows:

Visual Acuity

(a) Apparatus and Set-up. Five Snellen test charts, each with a different arrangement of letters, and a blank card about 6 by 9 cm. Four test charts are cut off so that only the 20-foot and successive smaller rows of letters are used. The central chart is left fully exposed. The five charts are arranged in close formation against a neutral-colored wall at the end of the examining room and each is numbered. The numerals must be distinctly visible at a distance of 20 feet. Two 100-Watt daylight Mazda lamps with reflectors are installed about 4 feet above and in front of the test charts to provide uniform illumination. A single 200-Watt daylight Mazda lamp in a suitable reflector may be substituted for the above. The switches controlling these lamps and the spot light used with the phorometer trial frame should be located on the side wall, where they can be reached easily by the examiner as he stands beside the examinee's chair. All windows and other sources of light located in front and to the side of the examinee are shaded during the examination. Other standard appliance acceptable to the Bureau for testing visual acuity may be used in lieu of the apparatus described above. (b) Procedure. Immediately upon entering the room the examinee occupies a chair facing the test charts exactly 20 feet away. In order to prevent study of the letters, the test is begun promptly. The examiner stands at one side of the examinee, using the 6 by 9 cm. blank card to cover the left eye while the

right is being tested. Designating one of the small charts by number the examiner instructs the examinee to read as many letters as possible. When the best vision for the right eye has been obtained, the card is shifted to cover the right eye and the left eye is tested on one of the other small charts. The large (complete) chart is used only when the vision is less than 20/20. The row of smallest letters read correctly determines the numerator of the fraction used in recording visual acuity. The number of smaller letters read in the next line is added to this fraction following the plus sign; e.g., 20/20+4. (c) Precautions. Every possible safeguard is thrown around the test to prevent memorizing the charts. Examinees awaiting their visual acuity test are not permitted to remain in the room within sight of the test letters or where they can hear them read aloud. When the examinee is suspected of having memorized the charts, the examiner will select letters in the doubtful lines and have the examinee name them. The small charts should be given a different arrangement from time to time in order to prevent memorizing the letters according to the position of the charts on the wall. One eye is completely screened from the letters while the other is being tested. The use of the hand or of an opaque disk from the trial case as a screen does not insure a monocular test. (d.) Interpretation of Findings. (1) *On original examination for flight training*: The minimal visual requirement for each eye is 20/20. (2) *For qualified and experienced pilots*: In the case of qualified pilots visual acuity of not less than 15/20 for each eye unaided by glasses may be permitted where the pilot's experience is sufficient to compensate for this departure from normal vision.

Depth Perception at 6 Meters

(a) Apparatus. Depth perception apparatus may be obtained from the Navy Medical Supply Depot on approved requisition. The apparatus shall be installed in such manner as to receive adequate illumination without the examinee being subjected to the direct glare of the light. (b) Procedure. The rods in the box are widely separated by the examiner and the examinee is required to manipulate the two cords as to bring the movable rod beside the fixed one in such position that both appear to be the same distance from him. The test is repeated several times, the rods being widely separated before each trial. The examinee's estimation of depth difference is read in millimeters directly from the scale and entered on the record. The test will be conducted at a distance of 20 feet. (c) Precautions. No information concerning the results of the successive trials will be given the examinee until after the test is completed. The examinee

is required to hold his head straight and not to one side or the other. Care will be taken by the examiner to avoid casting a shadow on the background, to avoid placing the hands so as to give the examinee information as to his error, and to avoid any facial expression from which the examinee might gain information as to the result of his efforts. (d) Interpretation of Findings. An average depth difference of more than 30 mm in five readings disqualifies. An erratic result will necessitate an examination the following day and if still erratic will disqualify until consistently below 30 mm.

The Maddox-rod Screen Test at 6 Meters

(a) Apparatus. A phorometer trial frame equipped with a pair of multiple Maddox rods and a pair of Risley rotary prisms, a blank card about 6 by 9 cm., which serves as a screen, and a blank card about 13 by 20 cm., with a 3-cm. hole in its center. (b) Procedure. Before beginning the test the examinee's fixing eye is determined. For this purpose the 13 20 cm. card is employed. The examinee seated, facing the spot light 6 meters away, grasps the card by the long sides with both hands. While looking intently at the light he slowly raises the card at arm's length and locates the light through the hole without closing either eye. Only one eye can see the light through the hole, and the eye selected for this purpose is the one used habitually for sighting or fixing. The phorometer trial frame is now properly leveled and adjusted closely in front of the examinee's eyes. One of the multiple Maddox rods is swung into position before the nonfixing eye. A rotary prism is placed before the same eye. The sighting or fixing eye must have an unobstructed view of the spot light. For the measurement of esophoria or exophoria, the Maddox rod is adjusted before the nonsighting eye to give a vertical line of light. The rotary prism is adjusted also before the nonsighting eye for the measurement of lateral deviation and set 4 or 5 prism diopters off the zero mark. This gives enough deflection at the first reading to detect an examinee who has been coached to say the line passes through the light. The 6 by 9 cm. card is moved from one eye to the other a few times to ascertain if the examinee sees both the line and the light. If the line is not seen readily, the Maddox rod is readjusted by centering it carefully in front of the pupil. Some further darkening of the room may be necessary to render it clearly visible. When the examinee sees the line with one eye and the light with the other, the examiner holds the card or screen in front of the nonfixing eye to shut out the image of the line. The examinee now sees only the light. After he has fixed it for several seconds,

the screen is removed for an instant and quickly replaced. In that brief interval the examinee will be able to see the line and locate it in reference to the light. After one or two such exposures, he will say that the line is to the right or left of the light or possibly through it. He is instructed to grasp the milled head that rotates the prism and turn it to bring the line directly into the light. To enable him to do this, the screen is removed from the eye at intervals and quickly replaced. Finally, the examinee will have rotated the prism enough to cause the line to pass through the light every time the screen is removed. The number of prism diopters necessary to do this is read from the scale of the rotary prism. This is entered on the record as esophoria if the prism base is out, and exophoria if the prism base is in. For the measurement of hyperphoria, the Maddox rod before the nonfixing eye is readjusted to give a horizontal line of light. The rotary prism is also readjusted before the same eye to measure vertical deviation. The screen is used exactly as before to give an occasional glimpse of the line. The number of prism diopters read from the scale is recorded as right hyperphoria if the prism is base down before the right eye, or base up before the left eye. It is recorded as left hyperphoria if the prism is base up before the right eye or base down before the left. In testing for hyperphoria, the Stevens' frame, which is normally a part of the phorometer mechanism, should be used instead of the large prisms. The Stevens' frame attachment is composed of weaker prisms which are calibrated in tenths of a diopter and therefore permit more accurate readings for hyperphoria. (c) Precautions. The Maddox rod and the measuring prism are used always together before the nonfixing eye and never before the fixing eye. The test gives an inaccurate result if the examinee is permitted to see the line for a longer time than is allowed by the momentary flash exposures described above. (d) Interpretation of Findings. Esophoria of more than 4 D., if associated with a prism divergence of less than 4 D., disqualifies. Esophoria of more than 10 D., disqualifies even if unassociated with any other visual defect. Exophoria of more than 5 D. disqualifies. Hyperphoria of more than 1 D. disqualifies. When the findings in the test for heterophoria exceed the maximum normally allowed, the red lens test shall be made for evidence of diplopia.

Prism Divergence

(a) Apparatus. Phorometer trial frame and spot light 1 cm. in diameter. (b) Procedure. The examinee is seated facing the spot light 20 feet away. The rotary prism of the phorometer trial frame is adjusted

before one eye so that by turning the milled head the prism will be acting base in. With the prism set at zero on the scale, the examinee should see but one spot of light. As the prism is slowly rotated base in, diplopia will be produced. The number of prism diopters which causes the onset of diplopia is read from the scale and entered on the record as prism divergence. (c) Precautions. The test cannot be made if the examinee has diplopia when the prism is set at zero on the scale. If this condition obtains, the examinee is disqualified. (d) Interpretation of Findings. Where there exists an esophoria at 6 meters, the prism divergence shall equal or exceed the esophoria in prism diopters. Prism divergence of more than 15 D. or less than 2 D. disqualifies without further evidence.

Red Lens Test

(a) Apparatus. Spectacle trial frame; red lens from trial lens case; small light, such as ophthalmoscope without head; and metric rule or tape. (b) Procedure. The examinee is seated in the dark room facing the dark wall or tangent curtain at 75 cm. distance. The spectacle trial frame is adjusted in position and the red lens from the trial lens case is placed in one cell of the trial frame. With the examinee's head in a fixed position, the small lamp is held directly in front of and on a level with the eyes, the light being directly before the dark wall or tangent curtain at 75 cm. distance from the eyes. The presence or absence of diplopia in this position (primary) is noted. The light is then slowly moved from the central position toward the right for a distance of 50 cm. in the horizontal plane. In the same manner the light is moved in the remaining five cardinal directions, up and to the right, up and to the left, to the left, down and to the left, and down and to the right. The presence or absence of diplopia in any of these positions should be noted. Normally, diplopia should not occur in any meridian within 50 cm. of the primary or central position. In the presence of diplopia, notation should be made as to whether it is crossed, homonomous, or vertical, and the distance in cm. from the central position that diplopia occurs. Where diplopia is suspected and the examinee has been coached to deny its presence, a prism of 3 or 4 D. may be placed, either base up or down, in one cell of the trial frame, and if diplopia is still denied, the statement is obviously untrue. (c) Precautions. The head of the examinee must remain fixed and the movement of the light followed only by the eyes. No tilting or rotation of the face shall be permitted. (d) Interpretation of Findings. Diplopia within 50 cm. of the primary position, in any meridian, disqualifies.

Test of Associated Parallel Movements

(a) Apparatus. A pin with a white head 2 mm. in diameter. (b) Procedure. The examinee stands near a window where good illumination falls on both eyes. The examiner holds the white-headed pin about 33 cm. directly in front of the examinee's eyes and directs him to look at it steadily. Nystagmus in the primary position is to be noted at this stage of the test. The examinee is then instructed to hold his head still and watch the pin as it is moved slowly to his right. The pin is not carried beyond the field of binocular fixation, but is held motionless for a moment near the lateral limit of the field. Each eye is inspected to discover any failure in fixing the pin. The lagging or overaction of either eye is noted. The pin is then carried slowly to the extreme left, up and to the left, straight up, up and to the right, to the extreme right, down and to the right, straight down, and down and to the left. The lagging of either eye in any one of these eight cardinal directions is due to underaction of at least one of the extrinsic ocular muscles. The underaction is recorded by stating which eye lags and in which direction the lagging is observed. In the same way any overshooting of either eye is recorded by stating which eye is involved and in which direction. If any underaction or overaction is revealed by this test, the final diagnosis shall be made on the tangent curtain by means of the red lens test. (c) Interpretation of Findings. The examinee is disqualified if the underaction or overaction of any of the extrinsic ocular muscles results in heterophoria at 6 meters in excess of normal limits, or produces diplopia within 50 cm. of the primary position in any meridian as determined by the red lens test.

Inspection of the eyes

(a) Procedure. Whenever possible, the eyes are inspected by bright daylight. Every pathologic condition and congenital anomaly is recorded. The following conditions may be found by this procedure:

Lids: Ptosis, blepharitis, trichiasis, entropion, ectropion, and chalazion.

Tear Sacs: Imperfect drainage.

Lower punctal: Failure of contact with bulbar conjunctiva.

Conjunctivae: Trachoma and old scars.

Corneas: Scars, pannus, and pterygium.

Pupils: Unequal size, irregular shape, and failure to react to light and accommodation.

(b) Interpretation of Findings. Any pathologic condition which may become worse or interfere with the proper functioning of the eyes under the fatigue and exposure of flying disqualifies.

Accommodation

(a) Apparatus. The Prince rule; a small millimeter rule; a card with several rows of small letters. (b) Procedure. Accommodation is measured from the anterior focus of the eye, which is about 11.5 mm. in front of the cornea. Using the millimeter rule, a pencil mark is made on each side of the examinee's nose 11.5 mm. in front of the right and left cornea, respectively. In measuring the accommodation of the right eye, the flat side of the Prince rule is laid against the right side of the examinee's nose, with the end of the rule at the pencil mark. The rule is held horizontally and extends directly to the front edge up. The card of test letters is held not more than 5 cm. in front of the examinee's right eye. His left is screened from sight of the letters by the flat side of the rule. The card of test letters is now carried slowly away from the eye and the examinee is instructed to begin reading the letters aloud as soon as they become legible. The card is halted the instant he begins to read the letters correctly and the point on the rule opposite the card is read off in diopters. This is the measure of accommodation of the right eye. To test the left eye, the rule is changed to the left side of the nose and the above procedure repeated, using a different line of letters. (c) Precautions. The examinee is placed with his back to good light, with the card well illuminated. The card is started from close to the eyes and carried away from them. The letters on the test card are read aloud. The same line of letters is not used for testing both eyes. (d) Interpretation of Findings. The following table gives the mean values of accommodation in diopters from 18 to 45 years of age. Accommodation may be regarded as within normal limits provided it is not more than 3 D. below the mean for the examinee's age. The examinee is disqualified if his accommodation falls more than 3 D. below the mean for his age, but before an examinee is disqualified, his accommodation shall be taken on three successive days and an average of the three findings determined. Accommodation may be affected by fatigue, staleness, or other debilitating conditions.

Angle of Convergence

(a) Near point of convergence (PcB). (1) Apparatus. The Prince rule; a pin with a white head 2 mm. in diameter. (2) Procedure. The distance to this point is computed from the base line connecting the centers of rotation of the eyes.

The end of the Prince rule is placed, edge up, at the mark on the right side of the nose, 11.5 mm. in front of the cornea. The white-headed pin is held 33 cm. away in the meridian line above the edge of the rule and the examinee is instructed to look at it intently. If both eyes are seen to converge upon the pin, it is then carried in the median line, along the edge of the rule toward the root of the nose. The examinee's eyes are carefully watched and the instant one is observed to swing outward the limit of convergence has been reached. The point on the rule opposite the pin is then read in millimeters. This test is repeated until a fairly constant reading is obtained. To this reading 25 mm. is added, which will give approximately the distance from the near point of convergence to the base line, PcB. (3) Precautions. Both eyes must converge upon the pin at the start of the test. The examinee's observation of the onset of diplopia is not relied upon to determine the near point, although in order to test his veracity he is asked to state when he sees double. (4) Interpretation of Findings. The near point of convergence, unlike the near point of accommodation, varies little with age. Its measurement is of value only in computing the angle of convergence. Examinees are not qualified or disqualified on this measurement, but on the angle of convergence.

(b) Interpupillary Distance (Pd).

(1) Apparatus. A small millimeter rule. (2) Procedure. The examiner stands with his back to the light, face to face, with the examinee. The rule is held in the examiner's right hand and laid across the examinee's nose in line with his pupils, as close to the two eyes as possible. The examiner closes his right eye and instructs the examinee to fix his eyes on the open left eye. With the eyes in this position, a predetermined mark on the rule is placed in line with the nasal border of the examinee's right pupil. The rule must be held steadily in this position while the examiner opens his right eye and closes his left. The examinee is then instructed to look at the open right eye. The point on the rule in line with the temporal border of the examinee's left pupil is read in millimeters and the exact difference in millimeters between the two points on the rule is the interpupillary distance.

(c) Computing the Angle of Convergence. (1) Procedure. The following formula is used for computing the angle of convergence:

$$\text{angle of convergence} = \frac{\frac{1}{2}\ \text{Pd} \times 100}{\text{Pc B}} + 3.$$

(2) Interpretation of Findings. An angle of convergence of less than 40 degrees is undesirable, but is not disqualifying unless associated with excessive exophoria or diplopia on the tangent curtain, except in the extreme positions.

Central Color Vision .

(a) Equipment. Pseudo Isochromotic charts prescribed for the Navy. (b) Procedure. The examinee is placed with his back to good light (natural light is preferable) in such a manner as to insure that the plates of the chart are illuminated and free of shadow. The plates are exposed to the examinee, who is required to call the numbers or letters indicated in the colored chart. The examinee may be permitted to tilt or alter the position of the charts to improve the light effect. His identification of the numbers should be reasonably prompt. (c) Interpretation of Findings. Evidence of color blindness as disclosed by this test shall disqualify. Minor confusion over certain plates will be considered with regard to their importance. In every case where the examinee manifests confusion or inability to pass the test for certain plates, such plates shall be listed in the report of examination with the remark, "Failed," "Confused," or "With Difficulty," as the case may be.

Field of Vision

(a) Finger Fixation Test. The examiner faces the examinee at a distance of 2 feet. He instructs the examinee to close his left eye and to fix his right eye on the examiner's left eye, the examiner's right eye being closed. The examiner then brings his moving fingers in from the periphery midway between them. The examinee is instructed to say when he sees the fingers and how many. He should see them as soon as the examiner, if normal. The fingers are brought in from all cardinal directions. The test is then repeated for the left eye. Any evidence of abnormalities should be given detailed study on the perimeter. (b) Interpretation of Findings. The field of vision for each eye shall be normal as determined by the finger fixation test. Where there is evidence of abnormal contraction of the field of vision in either eye, the examinee will be subjected to perimetric study for form and color. Any contraction of the form field of 15° or more in any meridian shall disqualify.

Refraction (to be done only on original examination or for some special indication).

(a) Apparatus and drugs. Electric retinoscope, or plain retinoscope and wall lamp; trial case and trial frame; Snellen test type; and

cycloplegic. (b) Procedure. The tension of both eyes must be taken by palpation and found normal before instilling a cycloplegic. The fundus of both eyes must also be examined with the ophthalmoscope, and if evidences of glaucoma are found a cycloplegic will not be used. One drop of a 4 per cent homatropine solution is placed in each eye every 10 minutes until 4 instillations have been made. At the end of 1 hour from the time of the first instillation, the examinee is ready for refraction. Retinoscopic examination is conducted in the dark room and the results of the refraction are then verified by having the examinee read the Snellen charts. The minimum correction required to enable the examinee to read 20/20 with each eye is recorded, together with the true correction as determined by retinoscopy. (c) Interpretation of Findings. The examinee is disqualified if he requires more than 2 D. total correction in any meridian in order to read 20/20 each eye with the accommodation paralyzed. Of this allowable correction, not more than a total of .5 D. may be due to any form of myopia or astigmatism, or any combination thereof. (d) After treatment. After the use of a cycloplegic the examinee must wear dark glasses until the effects have disappeared. The instillation into each eye of 1 per cent solution of pilocarpine hydrochloride in distilled water will contract the pupil and thus relieve the photophobia. This test has been discontinued unless indicated by other tests.

Ophthalmoscopic Examination

(a) Indication and Precautions. The examination shall be conducted on original examination and when otherwise indicated. The examination must not be made before the refraction is completed. In examining the macular region of the retina, the light should be reduced and the exposure made as brief as possible. (b) Interpretation of Findings. Any abnormality disclosed on ophthalmoscopic examination that materially interferes with normal ocular function disqualifies. Other abnormal disclosures indicative of disease, other than those directly affecting the eyes, will be considered with regard to the importance of those conditions.

Instruments. At the Naval Air Station we are most fortunate in having the most modern instruments to work with. They include the following: a modern phorometer, refraction unit, keratometer, projection type chart, tangent curtain, stero campimeter, perimeter, depth perception instrument, binocular ophthalmoscope, binocular slit lamp and all necessary small instruments to conduct a complete scientific study of the

human eye. There is no scarcity of patients, for they are waiting in the morning, at noon and all afternoon.

The early history of the obtaining of glasses for naval personnel was, indeed, quite a problem. After the refraction and when glasses were needed, the patient was given a prescription and told that he must go ashore to have the glasses made. It seems that there was a gentleman's agreement to the effect that naval personnel were to receive a twenty-five per cent discount on glasses. However, some lived up to the agreement, others made no attempt to, and in some instances an exhorbitant price was charged for inferior quality material. Many times commercial optometrists were the offenders. Ethical optometrists passed a resolution to the effect that they favored service personnel obtaining glasses on a cost plus basis. However, patients with a prescription to fill seldom went to an ethical optometrist. The then District Medical Officer appointed a Board to investigate, and at last one optical firm entered into a contract with the Ships Service Department to do the dispensing for naval personnel at laboratory cost plus a dispensing fee. This plan worked well until the laboratory became so crowded with naval personnel that they were unable to take care of their regular customers, naval personnel being lined four or five abreast in the hallway from their door to the elevator shaft, thus blocking the building corridor.

The laboratory, having lost many of their expert mechanics to the armed forces, was not able to keep up with the work of dispensing plus the actual mechanical work. At last the District instituted a new plan—that of having all the dispensing done at the Medical activities, thus saving the civil laboratory this work and saving about eight man hours per man by having this work done at the Station. The plan works in the following manner: After the refraction, the opticians at the Medical activity take all measurements for the glasses; the patient pays the Ships Service Department the laboratory cost plus their service fee. The glasses are then ordered from the civil laboratory, and after completion, they are sent to the Medical activity, where they are adjusted to the patient by the opticians.

Material in the form of lenses and frames became hard to obtain. This, therefore, placed a new problem since naval personnel could not wait for from two to three weeks to obtain glasses. Many times it became necessary to send men to sea without glasses. At the Air Station, edge-shaping machinery was ordered so that the opticians on duty at this Station might complete the glasses. The machinery arrived and we

now do all of the laboratory work for the Air Station, except the actual surface grinding. Manufacturers' stock of lenses have about returned to normal. Thus, in most cases, we are able to refract a patient's eyes one day and deliver the glasses the following day.

The Optometry Department includes the refraction and supervision of the optical laboratory. It has also been my duty to teach classes of aviation medical students the ocular part of the aviation physical examination. These students are trained to do all of the preliminary work, such as visual acuity, muscle balance, etc., reporting any abnormal finding to the Flight Surgeon who must pass on the case.

The regular routine examination is done in the following manner: On sick call the men reporting in with ocular complaints are sent to the Optometry Department. The man is interviewed by the WAVE receptionist, who fills in all the details, such as name, rate, outfit, history and complaint. When his turn arrives, I listen to his complaint, take more case history and then take his vision and visual acuity, take the muscle balance, and do a retinoscopic examination. If vision is subnormal with corrective lenses, an ophthalmoscopic examination is made. After this preliminary screening, he is given an appointment for refraction, and glasses prescribed or told to correct his postural reading habits, lighting conditions, etc.

We do not have time to do all of the tests that are conducted in a modern optometric office—no twenty-one point examination. Many times a mydriatic examination is done as we must take care of every man needing our services in the shortest time possible, as it is our obligation to fit as many men as we can to be visually efficient to go to sea.

It is my desire not to be personal. However, I do believe it would be of interest to you to obtain a birds' eye view of an optometrist reporting for active duty—the first to meet the Medical Officers in Command of the Medical Department of this Station. My reporting for duty on August fourth, 1941, is a memorable day for me. Entering the gate of a new and strange life was a new experience for me, as the optometrist, as well as for the medical officers, who never before in the history of the Navy found it necessary to work with an optometrist. Taking my first official salute by the Marine Guard at the gate, I was escorted to the Dispensary, where I reported to the Medical Officer of the Day. He examined my orders, logged me in and introduced me to the officers standing about. I was taken by the Medical Officer of the Day to the Executive Medical Officer, Commander Carl J. Robertson (MC), U. S. Navy.

Commander Robertson is an outstanding eye, ear, nose and throat specialist. There we were face to face—he a medical eye man and I an optometrist. Well, what do you think: You are wrong, for although I know that he personally had little or no use for optometry, he was a real gentleman. Many times since then we have had heart to heart talks and when he left, his parting words were of praise for the work done by an optometrist for the Navy. Doctor Robertson is now a Captain and is Senior Medical Officer at another Station—a fine man and one of the outstanding ophthalmologists in the country. Doctor Robertson then led the way to the Senior Medical Officer's office. I had many misgivings before entering this private sanctum sanctorum, for I had read quite a good deal of this gentleman before entering the service. He, Captain Joel T. Boone, (MC), U. S. Navy, had been the White House Physician for three Presidents of the United States—Presidents Harding, Coolidge and Hoover. As I entered the office, I noticed a fine appearing, distinguished man sitting in a large high-back swivel chair at a large well-polished mahogany desk with pictures of his family on it. On the walls, tables and cabinets were autographed pictures of famous people—presidents of the United States, rulers of other governments and famous personages the world over. There he sat, with dignity and poise. Campaign ribbons decorated his uniform from the breast pocket to his shoulder, for he was designated as being the most decorated officer in the U. S. Navy. At a glance one knew that he was in the presence of an outstanding and distinguished character. He rose graciously, extended his hand and stated that he had expected me, for he had received advance notice of my orders. From there I was escorted around the Dispensary and then entered into a period of indoctrination that every officer must go through to familiarize him with Navy procedure. Then to the Eye Department of the Aviation Examining room, where I was destined to spend the next few years.

Optometrists, commissioned officers in the United States Naval Reserve, have now been on active duty for over two and one-half years, serving the United States of America and their profession. It is the endeavor of each optometrist as a commissioned officer to carry out the ideals of professional advancement as promulgated by the American Academy of Optometry. The inclusion of optometry in the ranks of commissioned officers of the Navy has afforded optometry an opportunity to demonstrate the scope of its service to the Medical Department and to the officers and men of the Navy, as well as their legal dependents.

In the fulfillment of the confidence and trust placed in the profession, we, the commissioned officers, as optometrists, have a herculean responsibility. We cannot maintain this confidence and trust alone. This must be a united demonstration by the profession as a whole. It has been stated by some optometrists that the success or failure of optometry in the Navy depends entirely upon the optometrists in the Navy. This is not true, for "united we stand and divided we fall." Unprofessional practices and environments in which some optometrists practice are embarrassing to optometrists in the service and retard optometry's advancement materially.

In the practice of modern optometry, many optometrists are qualified and have real ability to accomplish much good by the application of orthoptics. Careful consideration should be given each case, for when the desired result is not obtained, the resultant reverberation rocks the very foundation of optometry.

Optometrists in the service have volunteered their services to their country and to their profession. They have left their homes and their practices that humanity might receive the benefit of their training and skill, and that their profession might advance in the light of human understanding and judgment.

Optometry, as one of the oldest of sciences, has long sought public recognition as one of the professions and as one of the healing arts. Education and scientific advancement have now placed optometry as one of the professions and as one of the healing arts. To survive as a profession, optometry must adopt a code of professional and ethical standards to which the public has long been educated. Optometrists on the home front must eliminate any taint of commercialism in the practical application of rendering optometric service.

We optometrists, commissioned officers in the United States Naval Reserve, now on active duty with the United States Navy, are justly proud of the honor bestowed upon us. We cherish the opportunity to be of service in rendering our professional services, thereby aiding the Medical Department in carrying out its motto—"To keep as many men at as many guns as many days as possible." Our motto is "To aid the Medical Department in keeping as many men visually efficient at as many guns as many days as possible." We are aware of our responsibility in this time of need. We cherish the comradeship of our brother officers, and long after this war has been won and we are again in civil practice,

we shall meditate in the past, knowing that we have been of service to our country and our profession.

Fellows of the American Academy of Optometry serving on the home front carry on. We shall join you later on in our united obligation to humanity and to our profession.

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THE PATIENT-DOCTOR RELATIONSHIP UNDER SOCIALIZED MEDICINE

The American workingman is being urged to write to his congressman in support of the Wagner-Murray Senate Bill No. 1161 to socialize medicine. The benefits to be derived by the average citizen have been enumerated and given considerable publicity in an effort to provoke support for the bill.

In the opinion of the writer, the medical service and benefits obtained by the citizen under socialized medicine would not be of the same kind and quality to which he had been accustomed. The deteriora-

tion of the quality of medical service would parallel the inevitable disruption of the patient-doctor relationship.

The high quality of our medical service today can be explained in terms of the patient-doctor relationship. When a doctor is called in to see a patient, his compensation and the prospects of further calls from that patient or his family depend upon one factor, how well the service he performs today merits the patient's approval. Under a free economy, the doctor can build his practice by consideration of the needs and wishes of his patients. There are only two people concerned in this intimate relationship, the doctor who performs the service and the patient for whom the service is performed. This is the patient-doctor relationship and it must be maintained inviolate if the quality of medical service is to be maintained.

Socialized medicine as proposed in the Wagner-Murray Bill violates the patient-doctor relationship by introducing the politician between the doctor and the patient. What the patient needs or wishes will be of secondary importance to the doctor when his compensation and advancement depend not upon the good will of his patient, but upon the favor of the politician. Thus under socialized medicine the politician intrudes upon the patient-doctor relationship to the detriment of the patient as well as the doctor.

The intrusion of the politician into the confidential relations between patient and doctor produces a dictatorship and arises out of the fact that the proposed legislation taxes the citizen for medical service but gives to him no power or representation upon a board of directors to determine policies and to direct the management of the program. Instead of following the pattern of traditional American representative democracy, we have an organization set up along the lines of an absolute dictatorship. One man alone, the U. S. Surgeon General, has the power, under the proposed act, to formulate policy and to administer every detail of a service affecting the most intimate phases of the lives of the citizenry without being directly accountable to a board of directors representing the interests of the public.

This dictatorship has a board which functions only in an advisory capacity.[1] Its sixteen members are appointed by and responsible to the Surgeon General of the Public Health Service who himself is a political appointee. Furthermore, these members are chosen from a panel of names

[1] U. S. Senate Bill, No. 1161. Section 904, pages 41 to 43.

submitted by the various professional groups employed in the administration and actual rendering of services under the provision of this act. This advisory board represents only management and professional elements and the tax paying consumer does not possess any effective representation. This is genuine paternalism. The only difference between this and medical charity to the indigent is that the beneficiary under this dictatorial paternalism must pay for his benefits.

A dictatorship so absolute as that of the Surgeon General in his proposed capacity as manager of the socialized medical program is incredible. In Section 903 (a) and (b) he is entrusted with the sole power to direct this program. In Section 903 (c) the Social Security Board is obliged to pay all obligations incurred by him. An appeal for relief from any decision of his, regarded as unfair, can be heard only by him who made the original decision.[2] The unlimited power placed in the hands of this one man is beyond comprehension.

Furthermore, the centralization of this three billion dollar medical dictatorship in Washington will deprive the states and local communities of their rights. For example, there will be many practitioners who are licensed by their respective states to render a certain type of service whose qualifications will not be approved by the Surgeon General,[3] or will be found ineligible by the terms of the act or regulations as may be prescribed.[4] The net result will be that the legal right to practice conferred by the state on many practitioners will be nullified in relation to the performance of service under this act.

This dictatorial inspired act has in common with other pieces of proposed legislation two outstanding characteristics. First, the act creates huge funds of money which is spent without much restraint by political appointees. Secondly, the act will create another vast army of federal political appointees. The abuses found in this highly centralized federal and paternalistic program could be eliminated by giving to each local community complete autonomy in the management of its local medical program. Under such a decentralized program, the federal contribution would be confined to consultation and advisory functions. Such a program would be consistent with the ideals of representative democracy and would preserve the patient-doctor relationship with a minimum of interference by the politician.

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[2] U. S. Senate Bill, No. 1161. Section 907, pages 49-50.
[3] U. S. Senate Bill, No. 1161. Section 905 (4), page 45.
[4] U. S. Senate Bill, No. 1161. Section 905 (1), page 44.

When the politician is introduced into the patient-doctor relationship, the patient will discover many points where the medical service is inferior to that which he is accustomed. The two most frequent instances will be in regard to his choice of a doctor and his right to consultation with a specialist. On paper the patient will retain his right to choice of doctors. Actually the patient will have his choice of doctor only when he finds the name of his physician on the list of doctors serving under the plan.[5] The doctor of the patient's choice may have refused to serve under a politically dominated program or perhaps his qualifications for the service in question were not considered satisfactory. In either case the patient, if he gets any service, will have to take what Washington dictates.[6] The doctor whom the patient would choose is prevented by the system from serving his would-be patient and the disappointed patient must accept an unwanted substitute dictated by Washington. The only alternative for the patient will be to pay the fee of the doctor of his choice in private practice in addition to paying by taxation for the services of the government doctor he rejected.

The second most frequent instance of deteriorated medical service will occur in the right of the patient to examination by a specialist. As in the preceding, he has this right upon paper but in practice it may not always be so. Under our free economy a physician is always ready to arrange for examination by a specialist upon request by the patient. But, under a politically dominated medical practice, the doctor may prejudice his own possibilities of advancement if he, for example, should recommend a patient for examination by a specialist under conditions which Washington disapproved. Or, suppose the patient becomes anxious about his condition and for his own peace of mind desires examination by a specialist. Without the approval of his medical doctor, he cannot get an examination by a medical specialist.[7] It is also probable that the issue may be obscured by conflicting directives so that, because of doubt or uncertainty, the doctor will refuse to make recommendations for examination by a specialist. Furthermore, the right of the beneficiary to choose his doctor is limited to the choice of a general physician.[8] In the selection of a specialist the patient will be required to accept whatever specialist his general physician recommends. Political considerations rather than qualifications may determine the specialist to whom the patient will be

[5] U. S. Senate Bill, No. 1161. Section 905 (3), page 44.
[6] U. S. Senate Bill, No. 1161. Section 905 (11), page 47, lines 15-23.
[7] U. S. Senate Bill, No. 1161. Section 905 (5), page 45.
[8] U. S. Senate Bill, No. 1161. Section 905 (2), page 44.

assigned. The loss of the right to a free choice of a specialist will remind the beneficiary that he no longer is a free man but just a number on the Social Security records.

The prospective recipient of medical benefits under socialized medicine is going to be sadly disappointed with the quality of medical service he receives because the proposed socialization of medicine violates the simple and fundamental financial control exercised by the patient in the patient-doctor relationship. In this simple equation the doctor performs a service for the patient and in turn receives from the patient his fee for the service he renders. Under the proposed bill, the patient pays in advance by taxation for his medical service and then only such doctors as are posted by the Surgeon General may perform the service for such fee as he may stipulate. The tax-paying citizen, therefore, must accept the repudiation of his inalienable right to direct the management and policies in the employment of physicians to render himself a necessary servce. Each year an estimated three billion dollars will be spent by this dictatorship without any active participation by the tax-paying citizen in the administration through representative democracy. This is in effect, taxation without representation.

In the propaganda to the American workingman we find that one is led to expect that except for the payment of a small tax the services will be rendered free. We find this may not be true for the Surgeon General and the Social Security Board may set a schedule of fees to be paid to the physician for an office or home call or other service in addition to payment for this service through taxation.[9] The reason given for this additional assessment is to prevent excessive use or abuse of the medical privileges. Furthermore, it will be possible to place these additional fees in certain restricted areas. This provision will make it possible for the dictatorship to penalize certain states or counties which fail to obey the wishes of the dominant political power just as we now find complaint arising in a certain state where federal funds have been withheld from organizations which refused to create soft jobs for political appointees demanded by Washington. Furthermore, we find authorization to deduct from certain federal benefits such as unemployment insurance and old age benefits half or all of other federal benefits received by the beneficiary.[10]

The idea that socialized medicine will provide something for noth-

[9] U. S. Senate Bill, No. 1161. Section 911, pages 51-52.
[10] U. S. Senate Bill, No. 1161. Section 1113, pages 80-81.

ing for the workingman is a long way from the truth. Dr. Cary [11] estimates that the payroll deductions in the postwar era necessary to carry the burden of a twelve billion dollar annual social security program on top of a three hundred billion dollar war debt may take over one-third to one-half of the pay check. A thirty dollar weekly salary may represent only $15.00 or $20.00 when it reaches the working man.

If we must abandon the present era of free enterprise for some form of socialized medicine, why must we propose the most objectionable form of socialization which reduces our free citizenry to the status of a tax-paying guinea pig with no representation in the control of the program equal to the burden of taxation? We have plenty of precedent for other forms of socialized or group medical practice which preserves intact the essential patient-doctor relation. These tried and proven alternatives would preserve for the citizen the type of medical service to which he has been accustomed.

The insistence upon a solution of the problem of better medical care by an excursion into state socialism arises out of the demand for a compulsory rather than a voluntary program. For such citizens as have set up a satisfactory health and insurance program, the compulsory character of the proposed legislation creates a duplication of service as well as invading the personal rights of the individual. Since we recently repealed a constitutional amendment to insure the right of the individual to choose a non-essential alcoholic drink regardless of the consequences, it is most inconsistent to refuse the citizen his right to choose whether or not he wishes to participate in a program involving such essential matters as health and insurance. When participation involves an annual tax of approximately two hundred dollars, the right of the individual to choose whether or not he will participate surely ought to be held as sacred as his right to choose an alcoholic drink.

The discussion of this proposed legislation has been largely from the point of view of the patient rather than that of the doctor. Before we conclude this paper, we should present our view with respect to the optometric profession. Toward any program of improved health the cooperation of this profession can be taken for granted. However, it will be capable of making its maximum contribution only when two conditions obtain. First, participation by the individual optometrist must be voluntary; and second, the independence of the optometric pro-

[11] Gary, Edward H. "Bill is a Menace to Every Family in the United States." Kiwanis Magazine. March, 1944. Page 41.

fession must be respected and maintained. The independence of the optometric profession involves three factors. First, the individual citizen must have the right to consult an optometrist of his own choice without the requirement of any authorization or permit and the optometrist must have the right to render any necessary optometric service. Second, the optometric practitioner must be the screening agent in the separation of those cases in which pathology is a factor from those which require only optometric service. Third, the optometric profession must be free to develope and extend inter-professional cooperation upon a voluntary basis in a free economy.

In conclusion, we observe that the objectives of the proposed legislation are worthy of commendation but the means proposed to secure these objectives are inadequate and constitute an experiment in state socialism and would eventually lead to the abandonment of those treasured liberties for which former generations have died. And even now the present generation is fighting to secure these same liberties for other peoples while we at home are invited to legislate them away.

C. W. MORRIS.

DELAY INDICATED IN LEGISLATION FOR OPTOMETRIC ARMY CORPS

According to a report of the recent annual meeting of the American Optometric Association, legislation for an Optometric Army Corps to provide commissions for optometrists refracting in the army will be delayed. A bill providing for the creation of a corps will be introduced in congress by A.O.A. officials some time after January 1, 1945.

RESPONSIBILITIES OF A YOUNG OPTOMETRIST

The young practitioner, locating in the larger towns and cities, desires first of all, to build a practice; he wishes as soon as possible to achieve professional success. How shall he acquire all this in the best and most lasting form. We are assuming the young optometrist has been properly educated and has adequate intellectual equipment for his calling. In this case success will most certainly come to the gentleman—a man who is respectful, self-respecting, and well-bred.

To himself, his associates and to his profession, what are some of the chief duties of the young optometrist?

First, he must be content to wait. Many evils that bring disgrace upon optometrists are due to the feverish desire for quick success. The desire to get on, the need of money, the wish to reap reward for the long years of study are powerful motives. It is hard to keep in mind that the best fruits ripen slowly; that the deserving get their reward; that slow success is as a rule far more lasting than quick success. The last point is especially true in view of the fact that the young optometrist should have leisure time for needed study, for filling-in the technical gaps of his knowledge and for thoroughly studying and deepening his comprehension of every case that comes under his care.

Too much impatience, for example, leads him to adopt unprofessional promotional methods which hampers the way to lasting and deserving success. We all know that the optometrist whose skill is advertised at a price brings dishonor to himself and the contempt of his professional fellows. At times the keen desire of the young practitioner for patients and experience drives him into this policy, the abuse of which is his own professional suicide.

It is urged that the young optometrist should continuously seek the advice of the wiser and more experienced long established practitioner. Complicated cases should be discussed, as this is to the advantage both to the patient and doctor. Study groups and meetings should be attended and the presentation of papers will help to encourage professional thinking.

ARTHUR P. WHEELOCK.

SPECIAL REPORTS

EXCERPTS FROM A REPORT ON VISUAL SAFETY*

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Mr. Charles O. Cozzens,[1] long a student of optometric economics, has recently presented the profession with his current views on the problem of corrective-protective goggles. This subject, of considerable interest to urban optometrists, is one in which we find little or no unanimous thinking and is one in which the profession has an important stake. Not only is it essential that the worker be properly served, but it is equally important that, from an optometric standpoint, he be served in such manner as to assist in bringing together into a closer working relationship the optometrist, ophthalmologist and dispensing optician.

Mr. Cozzens points out that vocational efficiency is becoming a bigger factor and is destined to become increasingly important. Today, less than two per cent of the annual ophthalmic prescriptions are compounded into corrective-protective goggles, but there are a number of phases to the development that make it significant away beyond the importance of the present volume. The antipathy to wearing goggles has been overcome to a large degree, and as the generation advances in years visual correction becomes necessary. This means correction as well as protection in industrial goggles and correction in other forms. This means professional services not only in examining, refracting, and prescribing, but also services in interpreting, fitting, re-evaluating, and servicing, and, Mr. Cozzens points out, these services must be paid for.

Present-day protection goggles without focus correction, helmets, eye shades, etc., are commodities and as such are sold directly to Industry. Industry may charge its employees the purchase price or part of the purchase price but many of them are given or lent to the employees. That is as it should be, both from humanitarian and social and economic standpoints; but this has established a precedent for goggles, and this cannot be permitted to prevail for corrective goggles.

Actually, it is difficult in some instances to separate the practical

*Industrial Visual Safety and Efficiency. Charles O. Cozzens. Southbridge, Mass. May, 1944.

[1] Vice President and General Sales Manager, American Optical Company, Southbridge, Mass.

application of eye care into branches of protection and correction because many protection cases are or will become correction cases. The materials employed, however, do separate very definitely into commodities (packaged goggles) and non-commodities (corrective materials), and the responsibilities for professional corrective eye care can never be in doubt. And now we must face the increasing interest in industrial visual efficiency for employees not engaged in tasks involving mechanical or light hazards, as well as those who need corrective protection.

For many years, many of the larger industries and some of the smaller ones have employed a screening test to indicate employees' visual acuity which develops the reference cases for refractive needs. The refractions have been performed by both resident and non-resident ophthalmologists and optometrists. The resulting corrective prescriptions have been compounded by the suppliers and supplied to the employees under a long list of varying practices, both in the methods of fitting and of charging. The best of these practices, says Mr. Cozzens, served the professional needs and the public benefits in an excellent manner, but others have been rated as only slightly better than spec-selling rackets.

As the interest grew and the opportunities could be seen, new forces have engaged until there is a general feeling that in industrial visual efficiency there is an immensely lucrative field that has been only slightly tapped. Both the field and the public needs are there, potentially as great as the numbers of employees involved, but how lucrative it will be remains to be seen.

In the opinion of Mr. Cozzens this will be determined by the manner in which the broad enterprise is approached, by the motives that actuate performance, the formula that establishes the professional relationships, where the corrective eye-care responsibilities are truly vested, how lay and professional services are correlated, by the degree of importance that is attached to relatively unimportant factors, by the economic returns to those engaged, and by the true value of the benefits to society.

But first, let us take all the mystery out of the needs. The author feels the responsibility to do this because he, as a supplier, must establish a policy in keeping with the needs and his policy can either promote or retard the interests we serve. Mr. Cozzens says:

"That there are hundreds of thousands of people in Industry who are visually deficient, who can be helped through corrective and remedial methods. Just who they are and where they are must be determined before they can be treated.

"That inefficient vision does impair efficiency and is one of the factors in vocational aptitudes.

"That there are not enough legalized refractionists to do all of the work, even if they wanted to, but that no one but a legalized refractionist should be allowed to accept the responsibility for those acts which result in a corrective or focus prescription.

"That industrial visual screening is essential and must be performed but it is only incidental to true eye-care service which must be the responsibility of the ophthalmologist, optometrist, and the ophthalmic dispenser.

"That adequate vision for the tasks to be performed should be an Industry 'must,' but an exaggerated claim for unprovable results in job placement would be unpardonable because it would fail the public interests, and will inevitably result in discrediting the responsible professions.

"That appropriate screening that determines the existence of an employee's deficiency at both near and distance in visual acuity, depth perception, color perception, suppression and muscular imbalances, is essential to the needs and must be performed under the direction and supervision of the legalized refractionists.

"That other findings (job requirements) having to do with vocational *visual* uses can have a marked bearing on the value of the professional services rendered and they are part and parcel of the visual eye-care service, but even then vision cannot be established beyond its rightful relation in vocational placement.

"That all findings determined by the screening test translate into real correction values only as they are processed by the professional man who is responsible for the prescription.

"That, therefore, eye care is not an adjunct to screening but rather corrective eye care is the dominating contribution to the public benefits and any method that develops the referrals that need correction and care, and provides the correlated visual uses, performs a useful function.

"That any other expressed value that tends to aggrandize the relation of screening to visual efficiency in a manner that is out of proportion to its actual contribution depreciates the value of the true services of the only individual who can write the prescription—the refractionist.

"That if there were enough ophthalmologists, optometrists, and ophthalmic dispensers, or existing assistants to care for the screening

needs, there would not be any place in this work for those not directly associated with the professions. But because there are not enough professional men and assistants, or because screening is now being performed *by* Industry in some instances, does not establish the wisdom of planning to create, educate and equip a separate and extended new group apart from the existing professions, and who are not responsible to the professions.

"That the professional men who have been engaged in industrial corrective eye care for many years and who are rendering exceptional service welcome all contributions to the progress that is being established; but they also know the limitations, which will not be altered by simply applying new terms or phrases and, therefore, they do not want to see their colleagues initiated in this work through any channel that does not vest the complete corrective eye-care responsibilities with the professions.

"That once the screening test has established the employee's visual deficiencies, by relatively broad classifications, and has segregated the reference cases and the individual visual job requirements have been delineated and the conditions under which they are imposed have been recorded, the relation of vision to the individual tasks must be evaluated by the professions' appreciation of the factors involved, and then the remedial services accomplished through the professional practices regularly employed in efficient corrective eye care.

"That other sensory functions besides vision may be of great importance in determining job aptitudes, but even so that does not establish the right for any lay person, who records those findings, to take over any part of the ophthalmic professions' responsibilities. It would be spurious to contend that the lay screener will only establish certain broad visual deficiencies to which he will add pertinent correlated visual job requirements and that all interpretations and remedial treatments will be confined to the professions and therefore there is no harm derived from separating the screening from the professions' responsibility. It would be spurious because it could only be maintained on the basis that what has transpired in some industries will continue. If the future is wrapped in the past, why any discussion? Why not just carry on as is? It would be spurious because the industrial needs and the social evolution demand more of the best eye care that can be serviced. And as screening is expanded and aggrandized by correlated findings, it could be made to take on an elevated status in the new fields because of the separated form of its introduction. It would be spurious because today's screening practice

grew out *of* professional needs while tomorrow's screening under a separate proposal would stand apart as determining the need *for* professional services held subject to its order. It would subordinate the only true remedial visual value by its assumed lead in pronouncing the needs which is but a short step from evaluating the results.

"That regardless of the existing screening practices in some industries, which are the product of growth rather than planning, there is no sound reason for the professions' endorsing "separation" if by so doing this will encourage practices inconsistent with the public benefits.

"That there are indications that the screening of the future will involve correlated visual factors and other values that should not be entrusted to lay people who are not personally responsible to the professions. For instance: Where are the limits of this form of socialized eye care established and how are the controls to be maintained if not exercised over the possible source of the abuses?

"That Industry is today confused in many instances because of conflicting eye-care proposals and is anxious to adopt a sound policy that is based on actual benefits and it wants to be divested of the operative responsibilities.

"That the professions cannot dictate to Industry what policy it shall adopt, but if the professions are united in their desires and present a formula for accomplishing the true needs with the most satisfaction to the employees and management, the values will be recognized and accepted by Industry despite the limited precedent. This is unquestionably true if properly supported by all of the supply houses.

"That the problem is created only if *other* job aptitude sensory functions are tied into corrective eye care for only when they are tied in do we create any plausible excuse for a separate cult or fourth estate. Therefore, why tie them in when, as a matter of fact, they can have no universally accepted value until appropriate norms have been established by scientifically evaluated statistical data that is still not available?

"That what is known today if practiced generally would bring tremendous values to society, so why not begin from there? Add to it as material values are contributed by research and experience garnered from all sources, and protect the future public benefits by educating all to know that vision is a priceless treasure worthy of the best professional services and that no one should be led or misled by advice from professionally uncontrolled lay people.

"That what is needed is a clear exposition of the practices and methods of those who have made a success of industrial eye care so that a greater number of professionally-trained men who want to, can embrace the opportunity and at the same time make sure that the professions do not sanction the dissipation of the benefits by encouraging *uncontrolled* lay participation. Lay screening help is essential, but it should be under the complete control of the professions.

"That the screening education for the needs must be provided and preferably from the seats of learning, but, until the necessary student curriculums are provided and also provisions are made to take care of those who are not going back to college, existing experience and knowledge should be made available to all members of the ophthalmic professions, and to those whose acts they shall direct. The agencies exist for doing this as rapidly as the true values and needs can be absorbed and translated into real public benefits.

"That Industry awaits the right kind of services for professional eye care and will accept a sound policy that recognizes the status of the professional men; but these professional men must know and be willing to conform to the needs or the service will go to the few, to the extent that they are able to render it, and the balance will be branded for what it is.

"That this can be the means of bringing professional eye care to the thousands who are without adequate services today, but it also can be the opening of the portals of a broad approach to an evolving socialized entree. The professions must meet and satisfy the needs, but they will not be serving either the public or themselves if, under the guise of expediency to satisfy a man-power shortage, they relinquish their just responsibilities to lay people who are not under their control. The professions' mere pronouncements need not necessarily establish a reality if they are not supported by the supply houses, but if society is best served by their pronouncements and resulting services, then the professions cannot shirk their duty even if faced with educating industry and others to the needs. The future professional relationships are involved with too many uncertainties and potential hazards to permit of choice.

"That the supply houses, who already have established relations with Industry or who can establish them, should encourage Industry to adopt a visual safety and efficiency program but only as they, the supply houses, acquaint the professions with a complete declaration of their related policy.

"That industrial eye care and the screening that facilitates the meeting of the needs are only new to the uninitiated, but that now when expanded efforts are reaching for the means to satisfy the expressed demands, is the time to pronounce the methods and protect the interests of both the public and the professions.

"That, because all of the manpower and facilities are not available in the professions' personnel does not provide reason or even lend excuse for permitting any methods that are contrary to the broad interests, to become wedged into the policy structure . . . "

Mr. Cozzens also adds, "That now is the time for the professions to assert their positions, make known their desires, establish the means whereby the interests of the public can be adequately protected and still preserve their inalienable rights to maintain the exclusive responsibility for all eye care when corrective materials are employed. But now as emphasis is being placed on the broader visual problem and as more impetus is given to supplying the needs of industrial visual efficiency and at a time when depleted professional manpower makes the task more difficult, there is an undeniable urge for a decision on the question of whether or not visual screening is the full responsibility of the ophthalmic professions. The urge does not come from those who have already mastered the problem, but rather from the desire to create the methods for satisfying the needs by bringing the benefits to the greater numbers. Now, today, is the time to plan for tomorrow. A decision based on an easy way for today can produce chaos tomorrow. If you believe that the responsibility for corrective eye care should be vested exclusively in the professions, if you believe that it cannot be vested in any one element of the ophthalmic professions, and that no part of it should be vested in any new group, then now, today, is the time to establish your desires and to seek the cooperation of all the related forces in order to accomplish the necessary education."

Mr. Cozzens points out (1) that there is a need for industrial eye work. (2) That a minor though important part of this work is screening. (3) This screening should be done as an adjunct to, and under the supervision of optometrists or ophthalmologists. (4) A formula is needed to develop a policy outlining the true needs of industry in regard to visual efficiency and care. (5) There is a danger that this industrial eye care program will be taken over by independent lay persons if the professions fail to rise to this opportunity now presented. (6) Enough is already known on the subject of visual care to properly lay the foundation for

a sound program of industrial eye care. (7) The professions must act in unison or all professional refractionists will suffer. (8) Industry awaits the proper services in this field, but will not wait indefinitely.

Here is a professional problem, well within the scope of the Academy. To the Standards and Practices Committee should go the assignment of gathering data with the request that they submit a progress report to the profession no later than January, 1945. The material interests of all refractionists should serve to bring the groups closer together as this problem must be met by trained technical people if the best interests of the worker in industry are to be served.

ANTI-SEMITISM—A TOOL TO UNDERMINE DEMOCRACY*

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In search of a scientific basis for anti-semitism in his paper entitled "Social and Psychological Factors in the Anti-semitic Attitude," J. F. Brown[1] makes some premises which are not too well founded in their application to such an heteronymous people as the Jews. He shows that "the stereotype is formed by abstracting certain characteristics from a class." The term "class," as such, designates a homogenuity which in itself most inadequately applies to Jews. They have lived for so many years without a real national homeland to nurture and create a similar background. Their only essential similarity has been their religion and the customs which that implied. Because they have been so scattered in the various lands of our globe, even their biological similarities have been subdued until to date, there are less likenesses between Jews than between those of many other national groups such as the English, French, etc., etc.

If the author's premise is correct when he discusses the "in-group" and the "out-group," why have not the same antagonisms arisen with respect to any minority national group in a given community? Why has there not been the same keen anti-Irish feeling in New York, or the anti-Polish feeling in Pennsylvania comparable in intensity to the anti-

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[1] J. F. Brown, Social and Psychological Factors in the Anti-Semitic Attitude. Am. Jour. Opt. & Arch. Am. Acad. Opt. 21, 3, 119. 1944.

semitism which exists there? If we accept the concepts proposed, how can we explain the occurrence in history of peaks of anti-semitic feeling? Why was there a Spanish Inquisition in which anti-semitism reached such heights that hundreds of Jews were slaughtered, yet this did not occur during the same era in other countries where Jews lived in comparable numbers? Why were Jews slaughtered in the Russian Pogroms under the Czar while they lived in peace in Germany? Why has the Germany of today succeeded in creating such a tempest of anti-semitic feeling that some three million Jews have been annihilated in Europe, while in Russia, England and the U. S. A. they have lived in harmony with their fellow countrymen?

To explain the anti-semitic attitude in terms only of the "Psychobiological Nature of Man and the Socio-economic nature of Modern Culture" completely overlooks the politico-economic reasons for its occurrence.

My contention is that these politico-economic reasons are in reality the essential basis for its existence and with this concept we can quite readily understand its true nature, its occurrence in peaks in history, and the real danger to our democracy which its existence represents.

An individual seeking to hold political and economic power over his fellow men must have a scapegoat, for the very condition of this power entails depriving his fellows of the benefits which a harmonious society would ordinarily give them. What better alibi for such society's ills could such an individual find than a minority too weak to defend itself politically. The Jews have been the scapegoat for power-thirsty governments in history. Their plight has been directly proportionate to the economic suffering of society created by this lust for power.

As the plight of the members of this society becomes worse (and this is an inevitable process in such an unbalanced situation) they must be prevented from organizing if the status quo is to be maintained. What better way could there be to prevent this than to develop antagonisms between minority groups? This is especially effective if the minorities are created around differences in beliefs rather than on the basis of biological differences. One can recognize if another is a member of the in-group or out-group if the distinction is biological, but if the distinction is on the basis of ideas, each must immediately suspect every other.

The Romans used this technique when they persecuted the Chris-

tians. Anti-semitism is just such a tool in the hands of Fascist-minded individuals and governments, and therefore must be vigorously combatted by each of us who would perpetrate our American way of life.

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ANNOUNCEMENTS

RUDOLPH H. EHRENBERG JOINS EDITORIAL BOARD

It is with pleasure that we announce the appointment of Dr. Rudolph H. Ehrenberg to the Editorial Board of the AMERICAN JOURNAL OF OPTOMETRY AND ARCHIVES OF AMERICAN ACADEMY OF OPTOMETRY. This appointment was made July 1, 1944, by Dr. Arthur P. Wheelock, President of the Academy.

Dr. Ehrenberg is one of a group of well known younger optometrists in America. He has been doing constructive work for optometry in the field of sociology and is a member of the Joint Committee of Ophthalmologists and Optometrists on Visual Care, of the Division of Social Welfare, for the State of Minnesota. On the Board, Dr. Ehrenberg will take the place of Dr. G. L. DuPlessis, who, we regret to announce, retires because of the pressure of other activities.

Dr. Ehrenberg was born at Graceville, Minnesota, July 5, 1910. He matriculated at Northern Illinois College of Optometry, graduating as an optometrist in 1930. While at college he was elected Beta Sigma Kappa as an honor student. He is licensed to practice in both South Dakota and Minnesota, and entered practice at Granite Falls, Minnesota, in 1931.

Dr. Ehrenberg is a Past President of his State Association, member of the A. O. A. and Optometric Extension Program. In March, 1937, he was elected to a fellowship in the Distinguished Service Foundation of Optometry and in December, 1941, was elected to fellowship in the American Academy of Optometry.

Dr. Ehrenberg brings to this journal a splendid background of training and practical experience as a professional optometrist, which qualifies him for his duties as an active member of the Editorial Board.

A. O. A. PRESENTS SCROLL TO PRENTICE

Charles E. Prentice, Father of Optometry and first president of the New York State Board of Examiners in Optometry, on the occasion of his 90th birthday, received an anniversary scroll on behalf of over 10,000 optometrists, members of the American Optometric Association, in recognition of his contribution to the advancement of eye health of the American people. The scroll was presented at a ceremony at the home of Mr. Prentice at Rye, New York by Dr. Harold V. Hutcheson, former president, New York State Optometric Association, and Dr. Franklin A. Seward, vice president of the Association.

Mr. Prentice, founder of the optometric course at Columbia University and author of countless volumes of original research material, is one of the foremost pioneers in optical research in America. Through his studies and the results of his initial researches, the perfection of the modern bombsight has been accomplished. Army, Navy and civil engineers are benefiting today by his scientific finding in the perfection of modern precision instruments of war.

His formula for the technique of using prisms has been of immeasurable aid to optometrists. Myopic and strabismic cases have been corrected that would never otherwise have been helped. This formula has assisted also in the training of pilots, since depth perception depends on stereoscopic sense and the use of prismatic lenses.

The anniversary scroll, first of its kind to be presented by the A. O. A., reads as follows: "On this day of June 24, 1944, signalizing the 90th birthday of Charles F. Prentice, M. E., we do honor to the Father of Optometry, the first president of the New York State Board of Examiners in Optometry, the founder of the optometric course at Columbia University, and the author of important original work in optics and valuable contributions to the advancement of optical science, and the discoverer of the law of decentration, a grateful profession offers him its tribute for his noble achievements."

SPECIAL CORRECTIVE PROTECTION GLASSES FOR FLIERS OVER JAPAN

The June 15 announcement of the bombing of one of the Japanese home islands by U. S. airmen in the new B-29 Super-fortresses opened for public release many phases of a story that up until that date had been a closely-held military secret. Of interest to optometrists is the

report dealing with the visual correction and protection for the army men of the 20th Air Force who manned these planes. "Something special" was indicated in the manner in which the force was assembled. Men were carefully selected on the basis of experience by General H. H. Arnold, who, in addition to heading up the whole U. S. Army Air Forces, also assumed direct command of the 20th Air Force. Men selected for this force were of an average age somewhat greater than that of most of our military fliers. Eye examinations were made on the entire group. For many of them, refractive correction was as necessary as glare protection.

Under the direction of Col. H. C. Chennault, Executive Officer to the Air Surgeon, ophthalmic specifications were requested for protection glasses that conformed as nearly as possible to the specifications for the Army-Navy Sun Glasses used by fliers, but which would be adapted as necessary to provide correction. Such specifications were prepared by the Scientific Bureau of Bausch & Lomb Optical Co., and accepted by the Office of the Air Surgeon. A contract was entered into whereby Bausch & Lomb was to supply corrective sun glasses as needed by the personnel of the 20th Air Force. In all, about 700 men were supplied with Army-Navy frames fitted with prescription-ground Ray-Ban lenses—including both single-vision and bifocal prescriptions.

Special problems were encountered in the filling of these prescriptions, involving considerable original computation, as well as field trips to consult with the Air Force refractionists. Individual lenses for the Army-Navy frame measure approximately 59 x 51 mm and are mounted at a 12° lateral tilt. This tilt has the effect of introducing an appreciable amount of effective prism, base-out, as well as altering the vertex power of the lenses. These factors were compensated for, and complete finishing charts prepared to show surface curves, center and edge thicknesses and vertex powers for the large 71 mm blanks used. An extra consideration requiring special attention was that all pairs of glasses should be ground to such thicknesses that the transmission of the two lenses would match within close tolerances.

Prescription laboratories which did the work were those of the Riggs Optical Co. in Chicago, and White-Haines in Zanesville, Ohio. Special toric tools had to be provided for the large blanks, as well as special formers for the Army-Navy frame eye shape. Also, because of the 12° lateral tilt, regular lens power checking instruments could not be used. Special Vertometers were built at Bausch & Lomb and supplied to

these laboratories, adapted so that lenses could be checked at the 12° tilt at which they were to be worn. This army program of visual care assisted in making the initial bombing a success. The story of war accomplishment of optometrists, ophthalmologists, opticians and the optical industry must lay heavy stress on the importance of the ocular work that has put hundreds of thousands of fighting men on fighting fronts—men who would have been unfit for service except for visual correction.

ABSTRACTS

A department in which will appear abstracts of the literature of optometry, ophthalmology and applied optics. These will be classified according to the following list although contributions to all sections will not necessarily appear in each issue.

1. Ocular Refraction.
2. Physiological Optics and Color Vision.
3. Ocular Muscles.
4. Orthoptics and Reading.
5. Anatomy, Histology and Embryology.
6. Ocular and General Pathology.
7. Ophthalmic Lenses and Material.
8. Instruments.
9. Hygiene and Illumination.
10. Applied and Physical Optics.
11. Education, Sociology and Economics.
12. Miscellaneous.

4. ORTHOPTICS AND READING.

RESULTS OF REHABILITATION. J. H. Ohm and J. P. H. Jenson. Optometric Weekly. 1943, 34, 15, 448.

The authors present a short report in which 69 cases are reviewed. These cases were all given "rehabilitation" orthoptic work to improve their uncorrected visual acuity. All had some visual defect prior to their period of training. Of the 69 cases reported upon 45 had their distance visual acuity brought up to normal monocularly. Of the 24 cases which failed to reach normal most showed some improvement in visual acuity.

C. C. K.

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9. HYGIENE AND ILLUMINATION.

OPTOMETRISTS AND INDUSTRY. W. W. Whiffing, Indiana Optometrist, 1943, 15, 12, 11-13.

The chief causes of eye injuries in the order of their importance are: (1) flying objects, especially those set in motion by hand tools; (2) abrasive wheels; (3) corrosive substances; (4) electric flashes, including welding; and (5) molten metal.

The occupational diseases affecting the eyes may be divided roughly into five groups: (1) those resulting from accidents or mechanical in-

juries; (2) those resulting from exposure to injurious radiant energy (intense light or heat rays); (3) those resulting from use of certain chemicals or other toxic substances; (4) those resulting from inadequate or improper lighting and other abnormal working conditions; and (5) those resulting from communicable diseases which, while not directly caused by any industrial process, may nevertheless be spread by unsanitary conditions and practices in work places.

Whiffing points out that industrial eye care programs as now carried on in industry are a benefit to optometrists inasmuch as these educational activities are aiding in the process of creating an eye-minded citizenry. A. V. F.

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11. EDUCATION, SOCIOLOGY AND ECONOMICS

ASSIGNMENT OF STUDENTS FOR EXPERIENCE AND SCHEDULING OF CLASSES. J. M. Miller. Minnesota Registered Nurse. 1943, 16, 6, 6-9.

Miller quotes Cabot as follows: "Professional services rendered by physicians and nurses are essential social services. They must be closely integrated with contemporary social conditions and very sensitive to social change. Great social changes are taking place all over the world today. It must therefore follow that unless the professions of medicine and nursing so plan their educational offerings as to keep at least in step with social change, they are likely to fail the country in time of its greatest need." He goes on to add that the change in the accent on medical practice with an increasing shift from diagnosis and treatment to prevention and positive health will also affect a change in the nursing profession. A. V. F.

REASONABLE CARE AND SKILL. T. G. Atkinson. Optometric Weekly. 1944, 34, 50, 1433-1434.

One hears a great deal, says Atkinson, in optometric circles about professional and organization ethics—the practitioner's attitude and conduct to his patients and his responsibilities to his profession. What one does not hear quite so much about—perhaps not enough—is that immediate aspect of his practice which the law calls "reasonable care and skill," and which it exacts from all professional men. This implies (1) That the practitioner is obligated to keep himself informed of all advance and progress that is being made in his profession and its allied sciences. No one is obligated to keep him informed. The burden rests upon him-

self, as far as such information is available. (2) That he is obligated to employ these advanced procedures in the care of his patients, at least so many of them as have become authenticated by the consensus of his profession, and are available to him. (3) That he is obligated, further, to arm himself with the equipment and materials necessary to the carrying out of such procedures, or to avail himself, as in many respects the physician does, of laboratories so equipped. No excuse for failure so to equip exonerates him from the reasonable care and skill requirement.

T. O. B.

OPTOMETRY AS A PROFESSION. A. Capurso. Kentucky Optometrist. 1943, 17, 2, 7-10.

"I anticipate the time when they [optometrists] will be expected to possess a general liberal arts background similar to that which is required of dentists, physicians, and engineers. If optometrists are to compare favorably with members of these professions, in the eyes of society, they will be expected to reflect an all-round and general broad educational background and culture. After all, one of the distinguishing features between a trade and a profession is that the latter provides broad learning in addition to the mastery of specialized skills."

T. O. B.

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12. MISCELLANEOUS

PHYSICAL THERAPY IN OPHTHALMOLOGY. H. Cadan. Eye, Ear, Nose and Throat Monthly. 1943, 22, 9, 338-342.

The author claims that physical therapy is gradually coming into ophthalmological practice. Many men are finding definite advantages in the employment of some of the more commonly used physical agents and he urges a further study of this field. He suggests the use of sinusoidal current in conjunction with other orthoptic techniques and believes that massage, too, has its place in ocular work. The author claims that in attempting to improve certain phases of color perception on the part of patients who are in part congenitally color deficient, he has found the use of sinusoidal current to be of value. He also outlines certain ocular uses for diathermy.

C. C. K.

WORTH WHILE ALSO TO OPTOMETRY. Charles Sheard. Journal of the American Optometric Association. 1944, 15, 9, 229-232.

In reviewing the current position of optometry, Sheard says, (1) Optometry will survive only on the basis of the adequacy and essential soundness of its educational systems and schools. (2) Optometry now needs to finish the job of professional housecleaning and getting its own house in order. (3) Optometry needs to put its money into education, schools, scholarships and get its educational institutions in such shape as to make them sources of great credit and soundness. (4) Optometric curricula are adequate in scope and in content as they appear on paper. They now need more of the finest of teachers. (5) Optometry needs to learn to appraise itself properly. It has the immensely important sphere of developing and maintaining in every individual, if possible, clear, comfortable and efficient binocular single vision by any and all physical, photic and educational methods. C. C. K.

PROFESSIONAL SERVICE TO SURVIVE. C. A. Kauffman. Kentucky Optometrist. 1944, 17, 12, 9.

The author discusses various aspects of professional practice. He suggests, for a proper office for an optometrist, the use of the following rooms, all equipped for their most effective use. Reception room, receptionist's room, adjusting room, visual training room, refracting room and laboratory room. C. C. K.

INDUSTRIAL REFRACTIONIST. R. M. Hall. Journal of the American Optometric Association. 1944, 15, 9, 266-267.

Should the optometrist engage in industrial eye work? If he does, says Hall, his hours will be long, the work hard and the problems many. Hall suggests that younger optometrists do this form of visual work, and points out that for those who enter this field that their entire practice will gradually become one of serving the industrial worker, as the fact of having him around in quantity will make it difficult for the optometrist to hold other types of patients.

C. C. K.

INDUSTRIAL RELATIONS. E. Adams. Optical Journal and Review of Optometry. 1943, 80, 24, 35.

The author, as President of the American Optometric Association, discusses various methods in which optometrists can assist industry. He comes to the conclusion that optometry can only be of value if emphasis

is placed upon professional technical refractive service as rendered by optometrists. Adams says, "Optometry is faced in this problem with making a decision as to whether its future lies in the sale of glasses or in the rendering of professional services through the assumption of its particular responsibility for human vision." He strongly urges the latter course. C. C. K.

THAT FEE FOR SERVICES AND PROFIT FOR MERCHANDISING MUST SEPARATE. G. S. Lawrence. Optician, (London). 1943, 106, 2750, 298.

The author points out that when an optometrist renders services separable from materials or an appliance, he will inevitably tend to be remunerated by a fee and that in the interests of the community his fee will inevitably tend to adequacy on its simple merits, and that remuneration for handling materials will tend to remain in the form of a profit. The two phases of an optometrists work should, in his opinion, be separated. A. V. F.

TERMINOLOGY. B. C. Hersch. Optometric Weekly. 1943, 34, 40, 1151-1153.

The author points out that a profession will advance technically only as fast as the rank and file of its members are willing to investigate, those tenets which appear to conflict with traditional beliefs. It is highly instructive to note, says Hersch, that a great percentage of research does not build something new but rather corrects some concept which has been existent. Scientific progress seems to develop through series of false starts followed by corrective processes. Optometry seems to be in the midst of a great corrective process and even though resistance appears from some quarters, the process will go on. Terminological improvement must accompany changes in concepts in order to speed up their general acceptance. Hersch calls upon optometric leadership to plan the approach to an improved terminology. Men in the ranks can only make the appeal for it. It is a natural and healthy symptom of growth when a profession is faced, as optometry is today, with the need for re-organization of its terms and this task should be tackled with that realization. For too many decades, optometry has accepted terms decided upon by other professions and which apply to its special field. Certainly optometry is capable of selecting its own terms—those tools which render inter-professional communication possible.

C. C. K.

WHAT PRICE VALIDATION? E. J. Margaretten. Journal of the New York State Optometric Association. 1944, 11, 6, 89-90.

You cannot live in a society complicated by economic, political and social forces, and remain impervious to the conditions of the times, and the conditions of the times in turn influence each individual's actions. Optometry to us, means not only practicing a profession which affords us a livelihood, but by its very nature, affords the livelihood of hundreds of thousands of individuals whom we treat as patients. In helping optometry realize the necessity for greater public service, the validation program was inaugurated. Primarily it will benefit the public by assuring them of the proper attitude in eye-service, but secondarily, it will assure the optometrist of a public to service.

A. V. F.

MANNERS AND MORALS. E. Freeman. Optometric Weekly. 1943, 34, 43, 1235-1237.

The author points out that the rules of "professional ethics" are a composite blend of morality rules, which lay down the rigorous and lofty moral obligations of the professional man, and etiquette rules which have nothing to do with morality but which outline the niceties of professional manners, by means of which the professions are set apart from all other vocations. An optometrist is unprofessional if he practices fraudulently or deceitfully or incompetently, but he is also unprofessional if he advertises, or if his location advertises for him.

Freeman also discusses the education, organization and function of optometry. Relative to the latter he says, "One of the genuine problems of the demarcation of the functions of optometry, about which there is still no final answer, is the question as to where the line between optometry and opticianry should properly be drawn. The manufacture of optical glass, frames, and mountings is clearly outside of the scope of optometry as such. The issue is whether what is known as optical dispensing, that is, the selection and fitting and adjusting of spectacles is a part of optometry or opticianry, and whether or not spectacles are to be furnished by the optometrist as the medium by which he completes his service to his patient, or whether spectacles constitute optical merchandise which is properly purchased in an optical dispensing store.

A. V. F.

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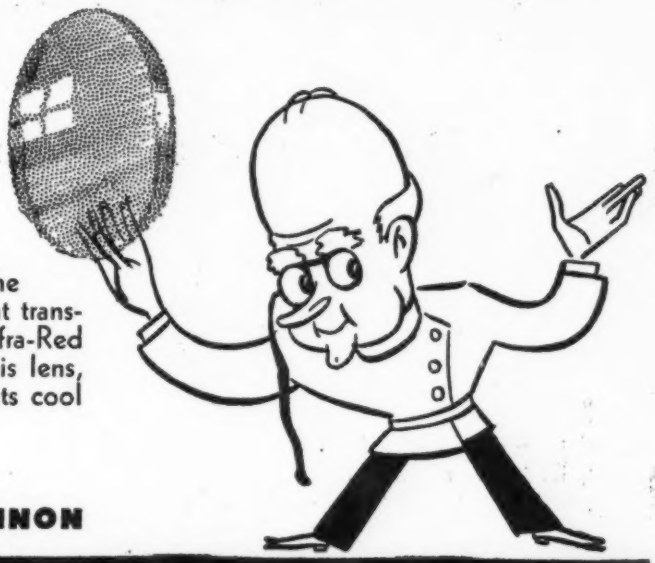

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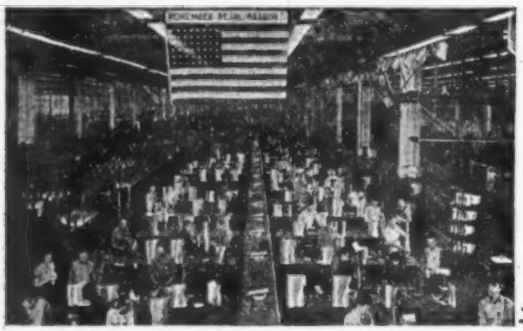

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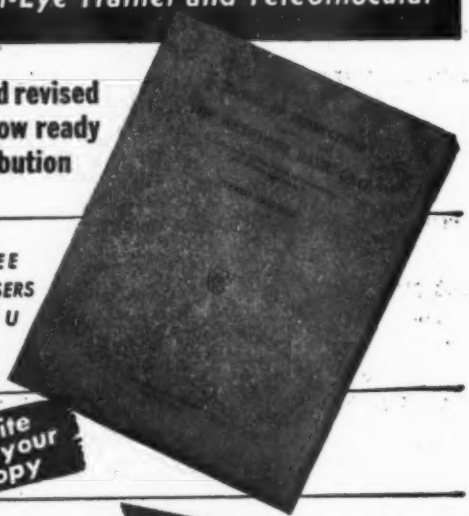

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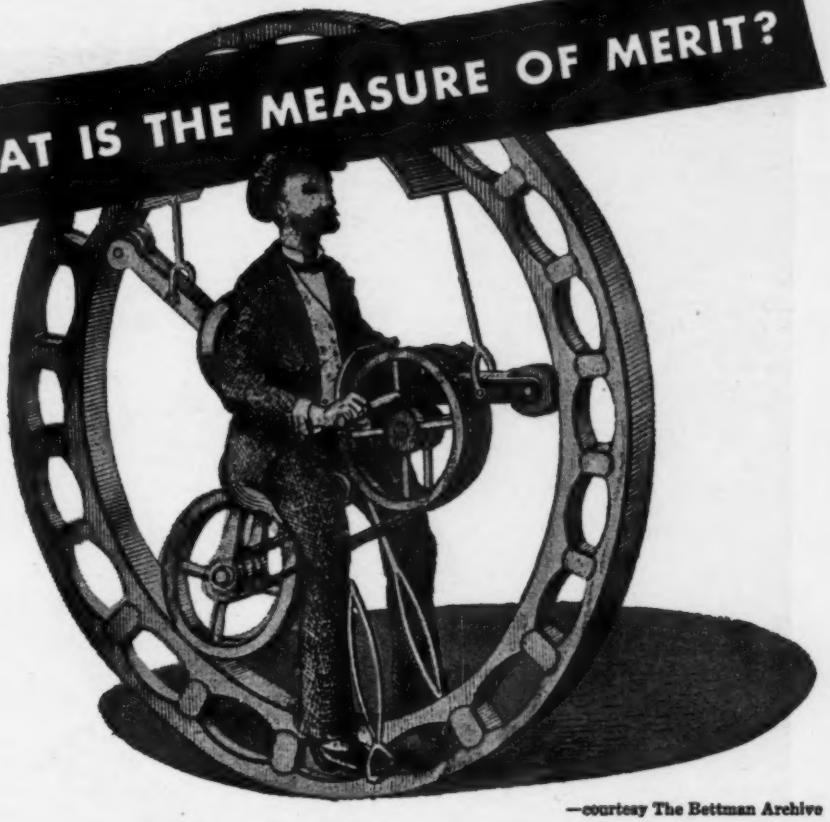

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The "Flying Yankee Velocipede" was the name given this unicycle in 1869 by its inventor, a Mr. Hemming. Propelled by hand turned cranks, this machine was reported to keep pace with fast trotting horses. But because it could not keep pace with man's need for locomotion—because it lacked real merit—the "Flying Yankee Velocipede" enjoyed little public acceptance.

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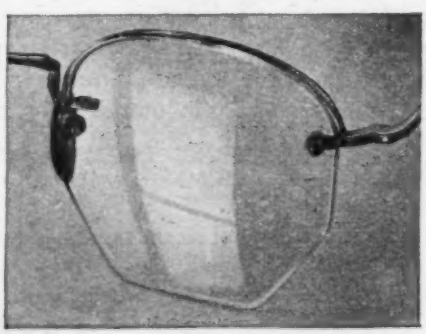

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